Gibson (C. B.)

STATEMENT OF FACTS

IN A CASE OF

DISLOCATION OF THE FEMUR

INTO THE

FORAMEN OVALE,

PROBABLY COMPLICATED WITH

FRACTURE OF THE ACETABULUM,

And Presenting Unusual Difficulties in

DIAGNOSIS.

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STATEMENT.

On 6th April 1854 Mrs. —— was violently thrown from her carriage and received an injury about the right hip. Dr. Archer of Chesterfield, who observed the accident, assisted the lady into a neighboring house, and after dressing two slight wounds about the face, made an examination into the nature of the injury to the hip. In a letter which I received from him, he states that he "very carefully made an examination by comparing the lengths of the two extremities and found that there was a lengthening of half an inch of the injured side, causing me to believe there was either fracture or luxation." In the course of an hour, perhaps, Mrs. —— was placed in a carriage and conveyed to her residence about a mile distant, and I visited her three or four hours afterwards.

I found her suffering much pain, and alarmed at the idea of a serious injury; and from her description of the accident, and the opinion which Dr. Archer had expressed, I expected to find one or other of the injuries mentioned. Placing her in the most favorable position for a rigid investigation, with the greatest care I examined the lower extremities, and found them to correspond exactly.

The trochanter, knees, ankles and feet were carefully compared, but I could detect no difference in the two limbs. There was no eversion nor inversion of the foot, no abduction of the limb, nor any inclination towards the other. The movements of flexion and extension, of abduction and adduction, and of rotation were all performed with natural ease and freedom. There was no crepitation, and, in short, nothing was elicited by the examination calculated to excite the belief that fracture or dislocation of any kind had occurred. Pain was produced, it is true, but not more than would result from moving parts which had received severe contusion, and this only I accordingly believed, and pronounced to exist. It may not be surprising that I relied entirely upon the correctness of this opinion, because forewarned of supposed serious injury, and long familiar with the difficulties of diagnosis in injuries of this region, and with the great importance of accuracy, I

gave to the examination peculiar circumspection. I advised rest for a few days, an anodyne, and some soothing applications to the contusion, and took my leave.

On the 23d of April, seventeen days after the date of the accident, having heard nothing in the mean time of the case, I was requested to visit Mrs. ——. I found her sitting in a chair, not suffering much pain, and able to walk a little about the room by the aid of a cane. She complained of stiffness in attempting to walk, which I accounted for by the presence of the effusion consequent upon severe contusion, and advised the use of moderate frictions. I made no examination of the limb, relying entirely on the correctness of the first one, and having no apprehension of serious injury.

On the 28th April I was again requested to see Mrs. ——, and only then learned that she thought the right limb certainly longer than the left. Upon examination I instantly discovered that it was indeed two inches longer, and upon carrying the hand to the upper and inner aspect of the femur, the head of the bone was distinctly felt occupying the foramen ovale. Rotation of the limb produced movement of the head of the bone, so that there could be no doubt as to the occurrence of dislocation. The other symptoms, however, of dislocation in this position were absent. There was no separation of the limbs, which is almost an invariable symptom, nor was there any forward inclination of the body—produced as it is by the extreme stretching of the psoas and iliacus tendon. The absence of these symptoms I accounted for by the fact of the extreme laxity of the whole muscular tissue of the patient, and her emaciation—the consequence of years of ill health. It may be easily imagined that the discovery of this dislocation was most painful to the patient as well as myself, for my confidence in the utter absence of serious injury had naturally had the effect of banishing all fear of it from her mind. She consented to the operation of attempting reduction, and I invited Dr. D. H. Tucker to assist me.

We attempted reduction by means of the pulleys; but after continuing their use for half an hour, without moving the bone, we determined to defer the attempt until the next day, and then to renew it with the assistance of chloroform.

On the 29th the attempt was renewed, Dr. Tucker being present, and also Dr. Marx, who had been invited to join us. Chloroform was administered, and extension made with pulleys in the usual manner for reducing this dislocation.

Finding, after an hour had been thus employed, no advance of the

head of the bone towards the acetabulum, I determined to place the patient on her side, and to make extension from the upper part of the femur perpendicularly upwards, at the same time pressing down the knee and foot to prevent the lower part of the limb from being drawn with the thigh bone.

Before, however, the necessary arrangements could be made for this, and whilst waiting for them, I took hold of the leg, and, flexing it, carried it across the knee of the sound side, and that moment felt and heard the head of the bone, distinctly, pass into the acetabulum. Dr. Tucker, whose hand was on the trochanter, at the instant exclaimed: "*It is reduced.*" This event produced no little excitement and rejoicing to us all, but in the midst of it we did not forget to compare the two limbs. The unnatural length had disappeared. Mrs. —— was carefully lifted from the table upon her bed, and the limbs being flexed, were placed upon a double inclined plane, and after directing an anodyne we retired. I saw her the next day, 30th, and the next, 1st May, and remarked some œdema about the limb and more than ordinary suffering, but attributed them to the operation of the 29th.

I continued to visit Mrs. —— every day, or every other day, when on the 8th May I was struck with the appearance of the right knee (that of the injured side): lying on the inclined plane side by side with the left limb; it certainly appeared to be the shorter. I called the attention of Drs. Marx and Tucker, who happened on that day to be present, to this singular shortening.

Mrs. —— had by this time suffered a great amount of pain, and her case had presented such a variety of forms that her spirits had become very much depressed, and she refused to submit to any further treatment, or even to have an examination made into the cause of this new symptom. By dint, however, of persuasion she at last, on 11th May, consented to such an examination as would lead to an explanation of the shortening of the limb. This was scarcely commenced, when the pain produced was so severe as to cause her to complain very much, and to induce her husband to refuse any further interference on my part with the case. With sincere regret I felt it my duty to retire from it at once. I was not invited to return to it, and do not know Mrs. ——'s present condition.

In September Mrs. — was taken to Philadelphia, and there had the limb examined by Dr. Norris, who expressed the opinion "that her bone had been broken," as he has informed me in a recent letter.

To the surgeon the report of this case cannot but prove interesting, exhibiting, as it does, anomalies perhaps unparalleled.

It will be remembered that Dr. Archer found a lengthening of half an inch in the injured limb, and that four hours afterwards I could not observe it, nor indeed any symptom indicating fracture or dislocation. For sixteen days nothing occurred to render either injury suspected. On the 17th day palpable evidences of dislocation into the foramen ovale existed; on the 18th day the dislocation was reduced. On the 9th day after reduction, shortening was observed—implying fracture of the neck of the bone during the attempted reduction, or an upward dislocation, or fracture of the superior rim of the acetabulum.

Supposing Dr. Archer and myself to have made equally careful examinations, it is clear to my mind that some change must have occurred in the limb in the course of four hours, for he found lengthening, and I none. Inasmuch, however, as lengthening is proved to have existed 17 days afterwards, though to a much greater extent, surgeons may insist that my examination, however careful, was defective, and that symptoms of downward dislocation *ought* to have been found at first. Remembering, as I well do, the extreme solicitude with which the examination of 6th April was conducted, it is very hard to admit this much—but how else explain the difficulty?

I could save the reader and myself some trouble, somewhat in the same way, if I admitted that the shortening which was discovered on 9th May, was produced by fracturing the neck of the bone on the 29th April—but I think I can prove that it was not; and possibly I may explain how it was produced.

It has been shown that, beyond peradventure, dislocation upon the foramen ovale existed. Now, if fracture had been produced in attempting its reduction, the head of the bone would have been left on the foramen ovale inevitably. Dr. Norris says: "I could not at the time of my examination feel the displaced head." If it had been broken off, and thereby left on the foramen ovale, he *must* have felt it—so that it is clear the neck was not broken.

But, perhaps, in attempting to return the bone to its socket, it was thrown upon the dorsum of the ilium, or into the ischiatic notch. Either of these would be more difficult to accomplish than the mere return to the acetabulum, but independently of this—in either case shortening would be instant—and deformity of the hip, especially in a thin subject, could not escape notice, and the comparison which we made of the limbs after the reduction must have revealed both. And

besides, Dr. Norris says, that in September, "there was fracture," not dislocation, and he must have felt the bone in either position had it been there.

The only mode in which I can account for the shortening, is by supposing that fracture of the superior rim of the acetabulum occurred at the time of the accident of 6th April. In this way, too, the non-appearance of the shortening at first may be explained. The limbs being placed on a double inclined plane, the position would naturally cause the head of the femur to press against the broken labium of the acetabulum, and by its weight would gradually separate it from the rest of the cavity, thus allowing the head to glide upwards upon the ilium, assisted, it may be, by the same muscles which produce shortening in fracture of the neck of the femur by their attachment to the lower fragment.

In reference to the opinion expressed by Dr. Norris, that fracture of the neck of the femur existed, when he saw the case in September, it must be stated that he had no opportunity of learning from me the history of it, and was obliged to judge of its nature by the symptoms before him. He found the limb shortened, but without eversion, and perhaps heard crepitation, and could not discover the head of the bone; he had a right, therefore, to believe that the shortening was not due to dislocation on the dorsum, or into the ischiatic notch.

I feel convinced that, if he could have been made aware of the undoubted existence of dislocation on the 28th April, and could have been apprized of its satisfactory reduction, he could not have believed that fracture of the neck was the cause of the symptoms which he observed.

The idea that there was fracture of the neck, *with displacement of the shaft downwards upon the foramen ovale*, I have never entertained for a moment, because we know that displacements in fracture are produced almost invariably by muscular contraction—and muscular contraction in fracture of the cervix femoris can never pull the shaft downwards; also, because if such displacement were possible, the extension employed in the treatment would have easily removed it; and still further, because the *round head of the bone* was felt on the foramen ovale, with almost as much distinctness as it might be on the skeleton.

I am very sure that in expressing his opinion, Dr. Norris did not at all design to disapprove of the treatment employed by me, still less to imply that the injury which he believed to exist had been produced by undue force in the effort of reduction.